

XI.—On a Tertiary Pleurotomaria. By FREDERICK M'Coy, Professor of Natural Science in the University of Melbourne.

To the Editors of the *Annals and Magazine of Natural History*.

GENTLEMEN,

In former numbers of your Journal I have made known the existence in the Tertiary rocks of Victoria of three species of *Trigonia*, previously only known as an abundant Mesozoic genus, and represented by a few living species in Australasian seas, but, by its complete absence in the intervening Tertiary periods, forming a remarkable exception to the ordinary rule of the duration of a genus in time being always continuous. I have now the pleasure to announce a parallel discovery, which will, I have no doubt, be of interest to geologists and also to zoologists occupied with the general question of the duration of genera, as removing another conspicuous supposed exception to the general law.

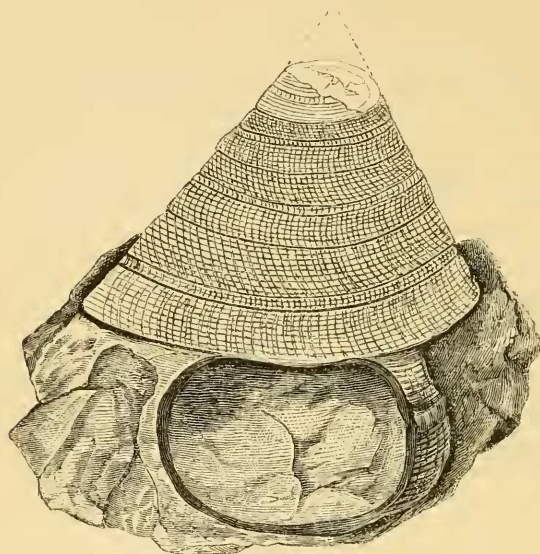
The genus *Pleurotomaria*, like *Trigonia*, is a most abundant one in all the Mesozoic marine formations, but, like *Trigonia* also, has hitherto been remarkable for its sudden disappearance at the close of the Cretaceous period and being entirely absent in the well-searched Tertiary formations of Europe, Asia, and America, but reappearing in our recent seas, where it is represented by two excessively rare species.

I have recently found in a hard brownish or yellow limestone, which, from its other fossils, is undoubtedly of the Upper Miocene Tertiary age, a fine large species of *Pleurotomaria* almost intermediate in character between the two living ones, having the large size, more elevated spire, and more numerous and flatter whorls of the living *Pleurotomaria Adansoniana*, but the more nearly central band of the *P. Quoyana*, and having the close spiral thread, crossed by nearly equally prominent equidistant lines of growth. It differs from both in its more elevated acute spire, or much smaller apical angle, and more equal striae. It may be characterized as follows:—

Pleurotomaria tertiaria (M'Coy).

Spec. char. Shell large, trochiform, apical angle 67° : whorls flat or very slightly convex; base moderately convex, with (?) a small umbilicus; band of moderate width, in the middle of each whorl, slightly depressed: surface with subequal promi-

nent thread-like spiral striæ, rather less than their thickness apart (about ten or eleven above and the same number below the band), about three slightly smaller on the band, reticulated by arched striæ, narrower, but nearly as prominent, and slightly further apart than the spiral ones. Length about 2 inches 9 lines; proportional width $\frac{9.5}{100}$; length of last whorl $\frac{3.3}{100}$.



Pleurotomaria tertiary, M'Coy.

Rare, in a hard yellowish limestone like lithographic stone, about 2 feet thick, interstratified with the upper part of a bed of older basalt about 100 feet thick, on east bank of Moorabool river, near Maude.

If this fossil had been found alone, or if the other fossils found with it had not proved the Upper Miocene Tertiary age of the stratum, it would in all probability deceive any geologist into the belief of its affording evidence of Oolitic strata at this place.